EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Tim Sullivan (Reg. No. 47,981) on 6/3/09.

1.   In the claims:

    a.   Claim 1;

-    line 14, replace "the" with – a --;

-    line 15, replace "a particular" with – the original --;

-    line 21, replace "each" with – the original" --;

-    line 22, insert "from the objects that have established notification bonds" after

    – bond --;

    b.   Claim 5;

-    line 2, replace "a" with -- the --;

    c.   Claim 6;

-    line 3, replace "a" with – the --;

    d.   Claim 10;

- line 2, delete "states include an";

- line 2, delete "that";

    e.   Claim 13;
- line 11, replace "the" with – a --;
- line 12, replace "a particular" with -- an object --;
- line 14, replace "an" with – the --;
- line 15, replace "a particular" with – the --;
- line 16, delete "original";

    f.   Claim 17;
- line 4, replace "a" with -- the --;

    g.   Claim 19;
- line 2, insert "a client configured to create a cached object associated with an original object, the client including a notification handler configured to maintain a notification bond associated with the original object and" before -- a server --;
- line 3, insert "the" after – issue --;
- line 4, replace "clients" with – the client --;
- line 9, replace "notification bonds" with – the notification bond --;
- line 12, replace "the" with – a --;
- line 13, replace "each" with – the --;
- line 13, replace "a particular" with – the original --;
- line 14, replace "a" with – the --;

- line 15, replace "particular" with – original --;
- line 16, replace "particular" with – original --;
- line 17, insert "; the notification bond established after determining the notification bond to be missing by comparing a client aggregate bond number with the server aggregate bond number" after -- original object --;

h.   Claim 21;
- line 2, replace "a" with -- the --;
- line 3, replace "comprises a filter component configured to determine object related events by monitoring" with – monitors --;

i.   Claim 22;
- line 1, delete "bond manager is configured to maintain a bond table and wherein";

j.   Claim 23;
- line 1, delete "bond manager is configured to maintain a notification log and wherein the";

k.   Claim 24 (Cancelled)

l.   Claim 25;
- line 2, replace "a" with – the –;

m.   Claim 28;

Rewrite Claim 28 as follows:

A computer-readable storage medium encoded with a data structure and computer-executable instructions to perform the method of:

creating a cached object from an original object, the original object being managed by a server; wherein a client interacts with a plurality of cached objects that are created on the client from objects managed by the server;

creating a bond manager on the server, the bond manager including:

a filter component configured to scan for incoming and outgoing events related to shared files from a file system manager of the server and forward the events to a service component; and

the service component configured to receive events from the filter component and establish notification bonds with the client, the service component maintaining a server bond table, wherein the server bond table includes a server identifier, a server aggregate bond number, and a notification log offset identifying a location within a notification log;

establishing a notification bond associated with the original object with the server, the notification bond enabling the client to obtain a notification from the bond manager on the server in response to an object related event associated with the original object; and

accessing a first indexing data field containing object identifiers, each object identifier uniquely identifying an object that is managed by the server; and

accessing a second data field containing entries, each entry being indexed to an object identifier in the first indexing data field and containing states associated with the notification bond associated with a particular object between the server and the client that caches the object identified by the object identifier;

wherein the first indexing data field and the second data field are created by the server and wherein the server accesses the first indexing data field and the second data field to determine what objects on the client require notification in response to an object related edit event and wherein the notification bond associated with the particular object

remains persistent through a reboot, the notification bond established after determining the notification bond to be missing by comparing a client aggregate bond number with a server aggregate bond number.

       n.   Claim 34;

       Rewrite claim 34 as follows:

       A computer-readable storage medium encoded with a data structure and computer-executable instructions to perform the method of:

       creating a cached object from an original object, the original object being managed by a server; wherein a client interacts with a plurality of cached objects that are created on the client from objects managed by the server;

       creating a bond manager on the server, the bond manager including:

           a filter component configured to scan for incoming and outgoing events related to shared files from a file system manager of the server and forward the events to a service component; and

           the service component configured to receive events from the filter component and establish notification bonds with the client, the service component maintaining a server bond table, wherein the server bond table includes a server identifier, a server aggregate bond number, and a notification log offset identifying a location within a notification log;

       establishing a notification bond associated with the original object with the server, the notification bond enabling the client to obtain a notification from the bond manager on the server in response to an object related event associated with the original object; and

       accessing a first indexing data field containing server identifiers, each server identifier uniquely identifying a server that manages an original object, the original object being cached by a client; and

       accessing a second data field containing entries, each entry being indexed to a server identifier in the first indexing data field and containing states associated with a

notification bond associated with a particular object between the client and a server identified by the server identifier, the notification bond being associated with a cached object created by the client from an original object;

wherein the first indexing data field and the second data field are accessed by a computing device and wherein the computing device uses the first indexing data field and the second data field in updating objects in response to an object related edit event and wherein the notification bond associated with the particular object remains persistent through a reboot, the notification bond established after determining the notification bond to be missing by comparing a client aggregate bond number with a server aggregate bond number.

      o.   Claim 39 (Cancelled)

      p.   Claim 40;

Rewrite claim 40 as follows:

A distributed file system for sharing objects, comprising:

means for a client to cache an original object managed by a server; wherein the client includes means for interacting with a plurality of cached objects that are created on the client from objects managed by the server;

means for creating a bond manager on the server, the bond manager including:

a filter component configured to scan for incoming and outgoing events related to shared files from a file system manager of the server and forward the events to a service component; and

the service component configured to receive events from the filter component and establish notification bonds with the client, the service component maintaining a server bond table, wherein the server bond table includes a server identifier, a server aggregate bond number, and a notification log offset identifying a location within a notification log;

means for establishing a notification bond associated with the original object with the server and the client, the notification bond enabling the client to obtain a notification from the server in response to an object related event associated with the original object in which the notification bond is associated;

wherein the notification bond remains persistent through a reboot, the notification bond established after determining the notification bond to be missing by comparing a client aggregate bond number with a server aggregate bond number and the object related event is associated with an edit of the original object; and

updating each of the cached objects with the original objects after a change is made to the original object.

q.   Claim 44;
-    line 4, replace "a" with – the --;

r.   Claim 51;
-    line 19, replace "such that" with -- wherein --;
-    line 19, replace "may be" with -- is --;

s.   Claim 56;
-    line 2, replace "the" with – a --;

t.   Claim 62;
-    line 2, replace "the" with – a --;

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES E. ANYA whose telephone number is (571)272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cea.

/Li B. Zhen/
Primary Examiner, Art Unit 2194